

AMENDMENTS TO THE CLAIMS:

1.(currently amended): A band control device comprising:
a controller for aggregating a plurality of physical links over an Ethernet network
into a single logical link, and
a distributor for distributing a traffic to a sub-logical link into which specified
ones of the physical links in the logical link are aggregated so as to meet a specified condition of
the traffic.

2.(original): The band control device as claimed in claim 1 wherein the distributor
comprises a traffic monitor for monitoring a traffic amount which meets the specified condition,
and a manager for assigning the physical links of a number corresponding to the traffic amount
to the sub-logical link.

3.(original): The band control device as claimed in claim 2 wherein when detecting that
the traffic amount becomes smaller than a predetermined value during a predetermined period,
the traffic monitor releases an aggregation of the sub-logical link to assign no sub-logical link
exclusively used for the traffic which meets the specified condition.

4.(original): The band control device as claimed in claim 1 wherein the controller
transmits/receives a message for establishing the sub-logical link to/from an opposite controller.

5.(original): The band control device as claimed in claim 4 wherein the controller relays
the message to a subsequent apparatus.

6.(original): The band control device as claimed in claim 1 wherein a number of physical links which the distributor aggregates into the sub-logical link is smaller than the number of physical links which the logical link aggregates.

7.(original): The band control device as claimed in claim 4 wherein the controller returns a message for establishing a sub-logical link port established based on the received message as a return sub-logical link port.

8.(original): The band control device as claimed in claim 4 wherein the controller returns a response message for the received message.

9.(original): The band control device as claimed in claim 4 wherein the controller returns, in response to the message requesting the establishment of the sub-logical link, a message rejecting the request.

10.(original): The band control device as claimed in claim 8 wherein when receiving the response message, the controller commences a communication of the traffic which meets the specified condition.

11.(original): The band control device as claimed in claim 5 wherein when a band of the sub-logical link requested by the received message is larger than an assignable band of a sub-

logical link in the subsequent apparatus, the controller discards the message and returns an error message.

12.(original): The band control device as claimed in claim 5, further comprising a scheduler for transmitting a traffic, with a priority control, to the subsequent apparatus,

the controller instructing the scheduler to transmit the traffic which meets the specified condition with a priority, and transmitting a message notifying a request band of the traffic to the subsequent apparatus.

13.(original): The band control device as claimed in claim 4 wherein when a communication of the traffic which meets the specified condition is completed, the controller transmits a message requesting an establishment release of the sub-logical link corresponding to the traffic.

14.(original): The band control device as claimed in claim 13 wherein when receiving the message requesting the establishment release, the controller relays the establishment release request message to a subsequent apparatus.

15.(original): The band control device as claimed in claim 4, further comprising a traffic monitor for monitoring a traffic amount which meets the specified condition,

the controller releasing the establishment of the sub-logical link when the traffic amount becomes smaller than a predetermined amount.

16.(original): The band control device as claimed in claim 4 wherein when the physical link included in the sub-logical link degenerates and no physical link substituted for the degenerated physical link can be secured, the controller transmits a message requesting that a number of physical links included in the sub-logical link should be decreased.

17.(original): The band control device as claimed in claim 4 wherein when no physical link exists since the physical link excluded in the sub-logical link is degenerated, the controller transmits a message requesting that a number of physical links included in the sub-logical link should be decreased.

18.(original): The band control device as claimed in claim 4, further comprising a traffic monitor for monitoring an amount of a traffic except the traffic which meets the specified condition,

the controller decreasing a number of physical links included in the sub-logical link when the traffic amount becomes larger than a predetermined amount, and outputting a message requesting that the number should be decreased.

19.(original): The band control device as claimed in claim 16, 17, or 18 wherein when receiving the number decrease request message, the controller decreases the number of physical links included in a corresponding sub-logical link.

20.(original): The band control device as claimed in claim 19 wherein the controller further relays the number decrease request message to a subsequent apparatus.

21.(original): The band control device as claimed in claim 4 wherein when receiving a message requesting an establishment of a sub-logical link different from the sub-logical link already established and no requested band can be secured, the controller returns an error message.

22.(original): The band control device as claimed in claim 21 wherein when receiving the error message, a source controller of the establishment request message transmits again the establishment request message after a standby for a fixed period.

23.(original): The band control device as claimed in claim 4 wherein when a plurality of sub-logical links are established in the single logical link, the controller determines a sub-logical link for decreasing a number of physical links by a priority of the sub-logical link.

24.(original): The band control device as claimed in claim 1, further comprising a collector for receiving the traffic from an opposite apparatus.